

Claims

1. Printing machine with at least a first print tower (T1; T2; T3) featuring two stacked satellite print units (02), characterised by having at least one further printing press (151) arranged in a plane above the print positions of the upper satellite print unit (02).
2. Printing machine as for claim 1, characterised by at least two further printing presses (151) arranged in a plane above the print position of the upper satellite print unit (02).
3. Printing machine with at least two satellite print units (02), characterised by both the satellite print units (02) having two further printing presses (151) arranged in a plane above the print positions of the satellite print unit (02), by means of which at least two printed webs (B10; B20; B30; B40) printed on one side in both the satellite print units (02) can be printed in a single colour on the other side.
4. Printing machine as for claim 3, characterised by the two satellite print units (02) being stacked above each other, forming part of a first print tower (T1; T2; T3).
5. Printing machine as for claims 1, 2 or 3, characterised by having a further three-cylinder printing press (151) arranged as an additional printing press for indirect flat bed printing.
6. Printing machine as for claims 2 or 3, characterised by the two further printing presses (151) being arranged as a six-cylinder printing press (152)..
7. Printing machine as for claims 1, 2, 4 or 6, characterised by the further printing press (151), which comprises at least two further printing

presses (151), or the six-cylinder printing press (152) being arranged stacked on the first print tower (T1; T2; T3).

8. Printing machine as for claims 1, 2, 4 or 6, characterised by the further printing press (151), which comprises at least two further printing presses (151), or the six-cylinder printing press (152) arranged stacked on a print tower (T1; T2; T3) alongside the first print tower (T1; T2; T3) with two linked satellite print units (02).
9. Printing machine as for claims 1, 4 or 8, characterised by the two linked satellite print units (02) of the print tower (T1; T2; T3) optionally being capable of printing two webs (B10; B20; B30; B40) each multicolour on one side or one web (B10; B20; B30; B40) multicolour on both sides.
10. Printing machine as for claims 1, 3 or 8, characterised by the satellite print units (02) each taking the form of nine-cylinder satellite print units (02).
11. Printing machine as for claims 2 or 3, characterised by the satellite print units (02) and the two printing presses (151) being linked in such a way that in one operating mode a web is fed through one of the satellite print units and also through one of the three-cylinder printing presses.
12. Printing machine as for claims 2 or 3, characterised by the satellite print units (02) and the two printing presses (151) being linked in such a way that a web optionally in the first operating mode is fed through both of the satellite print units, and in the second operating mode is fed through one of the satellite print units and through one of the three-cylinder printing presses, and in the third operating mode is fed through both of the three-cylinder printing presses.

13. Printing machine as for claims 2 or 3, characterised by the satellite print units (02) and the two printing presses (151) being linked in such a way that in one operating mode two webs are fed through one of the satellite print units and also through one of the printing presses (151).
14. Printing machine as for claim 13, characterised by both the webs being fed through both the satellite print units of the same print tower (T1; T2; T3).

15. Printing machine as for claims 2 or 3, characterised by the satellite print units (02) and the two printing presses (151) being linked in such a way that optionally in the first operating mode a web can be fed through both of the satellite print units and a second web can be fed through both the printing presses (151), and in the second operating mode two webs can each be fed through one of the satellite print units and through one of the printing presses (151).
16. Printing machine as for claims 2 or 4, characterised by two webs being fed in such a way through the print tower (T1; T2; T3) and through both the printing presses (151), being printed multi-colour on one side and in a single colour on the other side.
17. Printing machine as for claims 2 or 4, characterised by one of two webs being fed through the print tower (T1; T2; T3) and another web being fed solely through the two printing presses (151) in such a way that one web is printed multi-colour on both sides and the other web is printed in a single colour on both sides.
18. Printing machine as for claims 2 or 4, characterised by one of two webs being fed through the print tower and another web being fed solely through the two printing presses (151) in such a way, so that one web is printed multi-colour on both sides and the other web is printed in two colours on one side.
19. Printing machine with several print towers (T1; T2; T3) each with two satellite print units, characterised by the printing machine having at least two three-cylinder printing presses (151) or one six-cylinder printing press (152) with two three-cylinder printing presses (151).

20. Printing machine as for claims 2, 4 or 19, characterised by the printing machine having at least two adjoining handed print towers (T1; T2; T3), and that the two printing presses (151) or the six-cylinder printing press (152) are stacked on one of at least two print towers (T1; T2; T3).
21. Printing machine as for claims 1, 4 or 19, characterised by the printing machine having at least three adjoining handed print towers (T1; T2; T3), and that the two printing presses (151) or at least one six-cylinder printing press (152) are stacked on one of the three print towers (T1; T2; T3).
22. Printing machine as for claim 21, characterised by the three print towers (T1; T2; T3) being linked to a common six-cylinder printing press or two common three-cylinder printing presses (151), which is / are arranged stacked on the centre of the three print towers (T1; T2; T3).
23. Printing machine as for claim 20, characterised by three webs being fed in such a way through the two print towers (T1; T2; T3) and the six-cylinder printing press (152) or three-cylinder printing presses (151), so that two of the webs after being printed each multi-colour on one side and single colour on the other side, and the third web is printed multi-colour on both sides.
24. Printing machine as for claim 20, characterised by two of the three webs being fed in such a way through the two print towers (T1; T2; T3) and the third web being fed solely through the six-cylinder printing press (152) or both the printing presses (151), so that both the first-named webs are printed multi-colour on both sides, and the third web is printed single colour on both sides.
25. Printing machine as for claim 21, characterised by four webs being fed in such a way through the three print towers and the six-cylinder

printing press, so that two of the webs after printing are each printed multi-colour on one side and single colour on the other side, and the two other webs are printed multi-colour on both sides.

26. Printing machine as for one or more of the above claims, characterised by the printing machine having the means (153) to guide the webs from one of the print towers (T1; T2; T3) into the six-cylinder printing press (152) or into both the printing presses (151).
27. Printing machine as for claims 9, 16, 17, 18, 23, 24 or 25, characterised by the multi-colour sides being four-colour printed.
28. Operating mode of the printing machine as for claim 25, characterised by the four webs with the three print towers and the six-cylinder printing press being printed in such a way that both the webs having been printed multi-colour on one side and single colour on the other side, are fed between two webs that have been printed multi-colour on both sides into a folder structure (TR) .
29. Printing machine as for claim 25, or operating mode as for claim 28, characterised by both the webs that have been printed multi-colour on one side and single colour on the other side, are then run through both the centre one of the three print towers and the six-cylinder printing press.
30. Printing machine as for claim 25, or operating mode as for claim 28, characterised by the four webs that are fed through the three print towers and the six-cylinder printing press are printed in such a way that both the webs that are printed multi-colour on one side and single colour on the other side after being printed are fed beneath the two webs that are printed multi-colour on both sides into a folder structure (TR) .

31. Printing machine as for claim 25, or operating mode as for claim 28, characterised by both the webs that are printed multi-colour on one side and single colour on the other side are fed to a folder structure (TR) adjacent to the three print towers and the six-cylinder printing press.
32. Printing machine as for claim 25, or operating mode as for claim 28, characterised by the four webs that are fed through the three print towers and the six-cylinder printing press being printed in such a way that both the webs having been printed multi-colour on one side and single colour on the other side are fed above the two webs that are printed multi-colour on both sides into a folder structure (TR).
33. Printing machine as for claim 25, or operating mode as for claim 28, characterised by both the webs that are printed multi-colour on one side and single colour on the other side being fed to a folder structure (TR) located away from the three print towers and the six-cylinder printing press.
34. Printing machine as for claim 25, or operating mode as for claim 28, characterised by the printing machine having the means to guide the webs, which optionally permits the printing machine to be operated as for claims 28, 30 and / or 32.
35. Printing machine as for one or more of the above claims, characterised by the satellite print unit (02).having several pairs of cylinders each in the format of a form cylinder and a transfer cylinder (16; 17), and at least one with at least one of the transfer cylinders (17) operating in conjunction with the satellite cylinder (18).

36. Printing machine as for claim 35, characterised by the satellite print unit (02).having four pairs of cylinders, one of which transfer cylinders (17) operating in conjunction with the satellite cylinder (18).
37. Printing machine as for claim 35, characterised by the satellite print unit (02).having four pairs of cylinders, two of which transfer cylinders (17) operating in conjunction with satellite cylinders (18).
38. Printing machine as for claim 35, characterised by each of the two pairs of cylinders are driven by a rotary drive train with a common drive motor (61) separately from the other drive train.
39. Printing machine as for claim 38, characterised by a satellite cylinder (18) being driven by one of the drive trains.
40. Printing machine as for claims 35, 36, 37 or 38, characterised by a satellite cylinder (18) being driven by at least one drive motor (61) of its own, independently of the pairs of cylinders.
41. Printing machine as for claim 37, characterised by both the satellite cylinders (18) being driven by at least one common drive motor (61), independently of the pairs of cylinders.
42. Printing machine as for claims 35, 36, or 37, characterised by the cylinder pairs being driven by at least one drive motor (61) of their own, independently of the other pairs.

43. Printing machine as for claims 35, 36, or 37, characterised by each cylinder (16, 17) of the pair being driven by a drive motor (61) of its own.
44. Printing machine as for claims 35, 36, or 37, characterised by both cylinders (16, 17) of each pair being linked and driven by a common drive motor (61).
45. Printing machine as for claims 38, 43, or 44, characterised by an ink train (14) being driven by the drive for the associated cylinder (16).
46. Printing machine as for claims 38, 43, or 44, characterised by an ink train (14) driven by a drive motor of its own (64) independent of the drive for the associated cylinder (16).
47. Printing machine as for one or more of the claims listed above, characterised by a further printing press (151) having a pair of cylinders comprising a form cylinder and transfer cylinder (16; 17) and one where the transfer cylinder (17) is working in conjunction with the counter-pressure cylinder (18).
48. Printing machine as for one or more of the claims listed above, characterised by the six-cylinder printing press (152) having two pairs of cylinders comprising a form cylinder and transfer cylinder (16; 17) and in each pair a transfer cylinder (17) which is working in conjunction with the counter-pressure cylinder (18).
49. Printing machine as for claims 47 or 48, characterised by having a pair or pairs of cylinders respectively each driven by a drive motor of their own, independently of the other pair.

50. Printing machine as for claims 47 or 48, characterised by having each cylinder of the pair or pairs respectively driven by a drive motor of its own.
51. Printing machine as for claims 47 or 48, characterised by having the two cylinders (16; 17) of the pair being linked and driven by a common drive motor.
52. Printing machine as for claims 47, 48, 49, 50 or 51, characterised by an ink train driven by the drive for the associated cylinder (16).
53. Printing machine as for claims 47, 48, 49, 50 or 51, characterised by an ink train driven by a drive motor of its own (64) independent of the drive for the associated cylinder (16).
54. Printing machine as for claims 47 or 48, characterised by the counter-pressure cylinder (18) being driven by its own drive motor, independent of the drives for the paired cylinders and the drives for the other counter-pressure cylinders (18).
55. Printing machine as for claim 48, characterised by the counter-pressure cylinder (18) being driven by the same drive train as the associated paired cylinders.
56. Printing machine as for claims 47 or 48, characterised by the counter-pressure cylinder (18) being driven by the associated paired cylinders..
57. Printing machine as for claim 48, characterised by having both the cylinders (16; 17) of the pair linked in pairs, each pair driven by a common drive motor and the counter-pressure cylinders (18) each being driven by their own drive motor.

58. Printed product from a printing machine, characterised by having on the path to the former folder, out of four adjacent webs after printing, two webs printed multi-colour on one side, particularly four-colour, and single colour on the other side, and the other two webs printed multi-colour on both sides, particularly four-colour.
59. Printed product as for claim 58, characterised by the four webs, taken successively from bottom to top, having the following colour formats: bottom web 1 : 4 (underside single colour, upper side four colours), second web from bottom 4 : 1, third web from bottom 4 : 4 and fourth web 4 :4.

60. Printed product as for claim 58, characterised by the four webs, taken successively from bottom to top, having the following colour formats: bottom web 4 : 4 (underside single colour, upper side four colours), second web from bottom 1 : 4, third web from bottom 4 : 1 and fourth web 4 :4.

61. Printed product as for claim 58, characterised by the four webs, taken successively from bottom to top, having the following colour formats: bottom web 4 : 4 (underside single colour, upper side four colours), second web from bottom 1 : 4, third web from bottom 4 : 1 and fourth web 4 :4.

62. Printed product from a printing machine, characterised by having, out of four adjoining webs on the path to the former folder after printing, three webs printed multi-colour on both sides, particularly four-colour, and single colour on the other side, and the fourth web printed single colour on both sides.

63. Printed product as for claim 62, characterised by the four webs, taken successively from bottom to top, having the following colour formats: bottom web 4 : 4 (underside single colour, upper side four colours), second web from bottom 1 : 1, third web from bottom 4 : 4 and fourth web 4 :4.

64. Printed product as for claim 62, characterised by the four webs, taken successively from bottom to top, having the following colour formats: bottom web 4 : 4 (underside single colour, upper side four colours), second web from bottom 4 : 4, third web from bottom 1 : 1 and fourth web 4 :4.

65. Printing machine, operating mode or printed product as for one or more of the above claims, characterised by the printing machines having a printing width of six portrait oriented sheets alongside each other, in particular in newspaper format.
66. Printing machine, operating mode or printed product as for one or more of the above claims, characterised by the form cylinder having a circumference at least equal essentially to the length of two printed pages, in particular in newspaper format.
67. Printing machine, operating mode or printed product as for one or more of the above claims, characterised by the form cylinder (16) of the printing machine having a length equal to six plates alongside each other in a axial sense.
68. Printing machine as for claims 1, 3 or 14, characterised by having a folder machine (12) for further processing of one or more printed webs (B10; B20; B30; B40), for which the transport cylinder (123) has the capacity to accept at least seven cut lengths of the product in succession around the circumference.
69. Printing machine as for claims 1, 3 or 14, characterised by having a folder machine (12) for further processing of one or more printed webs (B10; B20; B30; B40), for which the cylinders (123; 132; 127) are driven by a drive motor (136) that is mechanically independent of at least one of the printing presses (13; 151) of the printing towers (02; 152).
70. Printing machine as for claim 69, characterised by having a folder machine (12) for further processing of one or more printed webs (B10; B20; B30; B40), for which the transport cylinder (123) has the capacity to accept at least seven cut lengths of the product in succession around the circumference.

71. Printing machine as for claim 68 or 70, characterised by having a transport cylinder (123) which can simultaneously supply three ribbons (109; 111; 112; 113; 114; 116) of three adjoining former folders (101; 102; 103; 106; 107; 108).
72. Printing machine as for claim 68 or 70, characterised by having a transport cylinder (123) having seven grippers (129) around the circumference.
73. Printing machine as for claim 68 or 69, characterised by having a folder machine (12) having two pairs of draw rollers (124) in the intake area, each with its own drive.

74. Printing machine as for claim 68 or 70, characterised by having a folder machine (12) which has two cutter cylinders (127), operating in conjunction with the transport cylinder (123).

75. Printing machine as for claim 68 or 70, characterised by the satellite print units (02), the additional printing press (151) / additional printing presses (151) and the folder machine (12) each being driven by rotary drive motors (61; 136) that are mechanically independent of each other.